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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,994	02/09/2005	Kazunori Tanaka	49677-165	2851

20277 7590 02/26/2007
MCDERMOTT WILL & EMERY LLP
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WASHINGTON, DC 20005-3096

EXAMINER

TRAN, HOANG Q

ART UNIT	PAPER NUMBER
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2874

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/523,994

Applicant(s)

TANAKA ET AL.

Examiner

Hoang Tran

H.T

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 6-8, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Newmoyer in view of the US Patent Application Publication to Ono (2003/0158309).

Newmoyer teaches a buffered cable having a second coating layer on an outer peripheral surface of a glass fiber (Fig 1), wherein a second resin composition constituting the second coating layer comprises a base polymer (Col 3 [5-15] and 100 to 250 parts of metal hydroxide and 10 to 100 weight parts of a nitrogen base flame retardant material per 100 weight parts of the base polymer (Col 6 [45-55]), and wherein the second resin composition does not contain halogenated materials (Col 2 [60-65]. Newmoyer does not teach a buffer cable being a fiber cable. Newmoyer does show

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application of which his buffer cable may be implemented in a fiber cable system (Col 3 [15-25]). Although the buffer layer cable of Newmoyer is directed to an electrical cable the same functionality of buffer layer cable maybe applied to other cables such as an optical fiber cable example disclosed on (Col 3 [15-25]). **A motivation** to use the buffer assembly of Newmoyer in a fiber cable system would be to increase protection of the interior cable from environmental damages such as fire hence the flame retardant properties of the buffer layer. It would have been obvious at the time of the invention to apply modification of Newmoyer buffer layer to a fiber cable in order to increase the durability of the fiber cable system. Newmoyer does not also teach the base polymer is constituted of a non-crystalline resin and wherein the base polymer comprises one of the components selected from the group consisting of a polystyrene, polystyrene-base elastomer, a mixture of the base elastomer and polyphenylene ether polymer. Ono does teach a composition comprises of a non-crystalline resin and polyphenylene ether composition and a polystyrene base elastomer (Page 12 [0153] and Paragraph [0066]) to enhance optical properties of the buffer fiber cable. **A motivation** for such an application would be to increase mechanical durability of the cable as well as enhance the optical and electrical properties of the cable. It would have been obvious at the time of the invention to one of ordinary skill in the art to apply the teachings of Ono to the buffer fiber cable of Newmoyer in order to produce a fiber cable with superior mechanical and optical properties.

As for claims 6-8, Newmoyer teaches the cable of claim 1; the specified limitations of transmission loss, residual thermal distortion and linear expansion

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coefficient are all function properties of the claimed cable of Claim 1. While the features of an apparatus maybe recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function alone (See MPEP 2114) In re Swinehart, 169 USPQ 226 (CCPA 1971); In re Schreiber 44 USPQ2d 1429 (Fed. Cir. 1997).

As for Claims 14, Newmoyer in view of Ono teaches the cable of Claim 1, wherein the Newmoyer teaches the buffer does not contain Phosphorous (Claim 7).

Claims 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Newmoyer in view of the US Patent Application Publication to Ono (2003/0158309).

With respect to claim 4, Newmoyer teaches the buffer cable of claim 1, as stated in the above rejection; Newmoyer in combination with Ono teaches the buffer cable of claim 3. The examiner identifies claim 4 as a product by process claim. Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. Once the examiner provides a rationale which supports the conclusion that the claimed product appears to be the same or similar to that of the prior art (See rejection 2 and 3), although produced by a different process , the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and prior art product . In re Marosi, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP 2113.

Claims 5 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the US Patent to Newmoyer (5,814,406).

With respect to claim 5, 10, and 11 Newmoyer teaches the optical fiber of claim 1, Newmoyer does not teach the cable wherein the second coating layer is formed of two or more coating sub layers. It would have been obvious to one having ordinary skill in the art at the time of the inventions was made to apply the coating of Newmoyer second layer and duplication into a plurality of layers to manufacture a more durable fiber (See Claim 1 rejection). A motivation to manufacture a duplication of the second layer would be to increase further the mechanical protection of the fiber and prevent internal cracking. Since it has been held that mere duplication of essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v Bemis Co.*, 193 USPQ 8.

With respect to claim 9 and 12, Newmoyer teaches the buffered cable of claim 1. The examiner identifies Claim 9 as Product-by-Process claim since it draws onto a method of making the buffer cable of Claim 1 through a cutting, drawing, and curing process. Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. Once the examiner provides a rationale which supports the conclusion that the claimed product appears to be the same or similar to that of the prior art (See rejection to Claim 1 and 5), although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP 2113.

Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Newmoyer in view of the US Patent Application Publication to Caveney (2003/0128938A1).

Newmoyer teaches a buffered optical fiber having a second coating layer on an outer peripheral surface of a glass fiber (Fig 1), wherein a second resin composition constituting the second coating layer comprises a base polymer (Col 3 [5-15] and 100 to 250 parts of metal hydroxide and 10 to 100 weight parts of a nitrogen base flame retardant material per 100 weight parts of the base polymer (Col 6 [45-55]), and wherein the second resin composition does not contain halogenated materials (Col 2 [60-65]. Newmoyer does not teach the buffer cable being connected to a ferrule connector wherein the coating end surface abuts against and abutting end surface of said ferrule. Caveney does teach a fiber cable wherein the end surface abuts against the ferrule connector (Fig 3) in order to couple a fiber optical cable to a connector. A motivation for this application would be to allow the buffered cable to interface with other external optical components within and optical system in a manner, which would limit loss and still maintain reasonable mechanical durability between the ferrule connector and the buffer fiber cable. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Caveney to Newmoyer optical cable in order to couple optical transmission to an external component efficiently.

Response to Arguments

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection. Applicant argues that the buffer cable layer of Newmoyer is directed to an electrical cable hence making the reference a non-

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analogous art to the applicant invention has been considered. However the examiner disagree because the buffer layer of Newmoyer main purpose is to act as a flame retardant which will protect the cable for fire. Hence the functionality of the buffer layer of Newmoyer and the applicants claim invention are of the same field in terms of its invention concept therefore the art of Newmoyer is analogous to the applicant claimed invention as describe by Claim 1. Applicant further argues on page 9 of the remarks filed on 11/07/2006 that the prior art reference to Newmoyer will cause "protrusions" which differs from the applicant invention. However there is no language within the Claims which indicating a protrusion may or may not exists within the buffer layer. Furthermore Newmoyer (Col 3 [20-50]) discuss a similar buffer layer as admitted prior art (4,678,295) wherein the buffer layer is applied to a fiber cable. Newmoyer buffer layer further improves his buffer layer by enhancing the flame retardant properties. Newly amended limitations have been addressed in the rejection above in view of Ono.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang Tran whose telephone number is 571-272-5049. The examiner can normally be reached on 9:00AM - 5:00 PM.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ht

Hoang Tran
AU 2874
February 19, 2007


SUNG PAK
PRIMARY EXAMINER